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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,456	11/26/2003	Paul R. Sharps	1002	5958
41170	7590	09/04/2007		
EMCORE CORPORATION 1600 EUBANK BLVD, S.E. ALBUQUERQUE, NM 87123			EXAMINER FICK, ANTHONY D	
			ART UNIT 1753	PAPER NUMBER
			MAIL DATE 09/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/723,456
Filing Date: November 26, 2003
Appellant(s): SHARPS ET AL.

MAILED
SEP 04 2007
GROUP 1700

Samuel Borodach
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 27, 2007 appealing from the Office action mailed March 22, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

An appeal to the Board of Appeals has been filed in connection with U.S. Application No. 10/773,343, which is a continuation of U.S. Application No. 10/280,593, which, in turn, is a continuation-in-part of U.S. Application No. 09/999,598.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on June 27, 2007 has been entered. This amendment was filed concurrently with the Appeal Brief and has been entered by the examiner.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

· No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 48-66, 68-80 and 82-98 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 48, at line 8, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 49-51.

In claim 52, at line 7, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 53-56.

In claim 57, at line 6, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 58 and 59.

In claim 60, at line 12, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 61-64.

In claim 65, at line 11, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 66 and 67.

In claim 68, at line 9, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 69-76.

In claim 77, at line 10, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 78-80 and 82-87.

In claim 88, at line 10, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 89-92.

In claim 93, at lines 8-9, the “substantially the same composition and thickness” limitation is not supported by the specification, as originally filed. The same applies to dependent claims 94-98.

Applicant cites the Rule 1.132 Declaration of Paul R. Sharps (Sharps Declaration) and argues that in a chemical vapor deposition process of the type described in the instant application, layer thicknesses are not the same because of variations caused by the deposition process. However, this argument is not deemed to be persuasive because the word "substantially" is never used in the originally filed disclosure to describe any part of the invention. The word "substantially" introduces a "fudge factor" that opens up whatever it is modifying to interpretation. Such interpretation is not supported by the original disclosure. If Applicant had wanted to introduce a fudge factor because things aren't perfect, it should have been done when the application was originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 48-66, 68-80 and 82-98 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 48, at line 9, it is not clear what is to be encompassed by the term "substantially the same composition and thickness". The same applies to dependent claims 49-51.

In claim 52, at line 7, it is not clear what is to be encompassed by the term "substantially the same composition and thickness". The same applies to dependent claims 53-56.

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In claim 57, at line 6, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 58 and 59.

In claim 60, at line 12, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 61-64.

In claim 65, at line 11, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 66 and 67.

In claim 68, at line 9, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 69-76.

In claim 77, at line 10, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 78-80 and 82-87.

In claim 88, at line 10, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 89-92.

In claim 93, at lines 8-9, it is not clear what is to be encompassed by the term “substantially the same composition and thickness”. The same applies to dependent claims 94-98.

With respect to the term "substantially the same thickness" being indefinite under 35 USC 112, second paragraph, applicant cites the same arguments used above with respect to this term and 35 USC 112, first paragraph. However, these arguments are not deemed to be persuasive because it is not clear how close to having the same thickness the corresponding layers must have in order to be considered to have "substantially the same thickness".

(10) Response to Argument

(A) The language "substantially the same composition and thickness" in claims 48-66, 68-80 and 82-98 does not render those claims unpatentable under 35 U.S.C. 112 First Paragraph

Applicant argues on page 6 of the appeal brief that the Examiner has misinterpreted and misapplied the requirements of 35 U.S.C. 112 First paragraph in dealing with the claim language "substantially the same composition and thickness". Applicant states that although the specification discloses the layers having "the same" composition and thickness, a person of ordinary skill in the art would have understood that the deposition process of the application inherently leaves small variations in the thickness and composition of the deposited layers, resulting in layers that are "substantially the same" in thickness and composition. The examiner respectfully disagrees. The original specification does not contain support for the broadening language "substantially the same composition and thickness". Slight variations in thickness and composition are inherent for any deposited film and one skilled in the art would recognize such variations upon reading the specification. However this does not

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give support to broadening of the claim language to include the term “substantially”. As stated above, the word “substantially” introduces a “fudge factor” that opens up whatever it is modifying to interpretation. Such interpretation is not supported by the original disclosure. If Applicant had wanted to introduce a fudge factor because things aren’t perfect, it should have been done when the application was originally filed.

Applicant further argues that the Examiner fails to take account of the statements regarding the phrase “substantially the same” in the 1.132 declaration and that the phrase “substantially the same composition and thickness” is consistent with what is disclosed in the specification as would be understood by one of ordinary skill in the art. The examiner respectfully disagrees. The 1.132 declaration submitted by applicant states that the ideal uniformity of composition and thickness of layers is a practical impossibility, that one may refer to the layers as having “the same” composition and thickness if in reality the layers inherently have small variations both in composition and thickness, the layers of the present invention are intended to be ideally “the same” but are not exactly “the same”, and out of caution and the interest of technical accuracy, the claim language of “substantially the same” is more accurate and supported by the specification. The declaration thus presents two views on the inherent imperfections/impurities of the layers. The first view is that one of ordinary skill may refer to layers having imperfections/impurities as having “the same” composition and thickness, even though the layers are not exactly the same. The second view is that the term “the same” is not technically accurate to those of ordinary skill and needs to be modified to be “substantially the same” to convey the imperfections/impurities of the

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layers. If those skilled in the art would already recognize that the methods utilized by the applicant produces layers that can be characterized by having “the same” composition and thickness, while actually having small variations in thickness and composition, altering the claims to include the term “substantially” seems to be adding more variations than the typical variations present in layers of “the same” composition and thickness. These added variations are beyond the scope of the original claims or specification and seem to be superfluous if as applicant states, those in the art understand that layers with “the same” composition and thickness can have small variations. Applicant also argues that there is no clear indication that the phrase “the same composition and thickness” in the claims would literally cover the slight variations in composition and thickness of the applicant’s invention. This is not considered persuasive as the applicant has already stated that the use of the phrase “the same” within the specification would include the small variations as interpreted by one of ordinary skill in the art. Also, a broad interpretation of applicant’s claims using “the same” would include minor imperfections/impurities as opposed to language such as “exactly the same” which would not allow those variations.

(B) The Rejections of Claims 48-66, 68-80 and 82-98 under

35 U.S.C. 112 Second Paragraph Should Be Reversed

Applicant argues that the phrase “substantially the same thickness and composition” is definite and that the 1.132 declaration submitted by the applicant indicates the term corresponds to variations of up to two to three percent in composition and in thickness. The examiner respectfully disagrees. At the outset, the examiner

notes that there is no description of such “normal variations” in the specification as filed, and the designation of two to three percent variation in a declaration does not render the claim language definite. It is not clear how close to having the same thickness the corresponding layers must have in order to be considered to have “substantially the same thickness”. There is no basis in the specification as filed for interpretation of the unsupported term “substantially”, and the claims are therefore not properly defined. Further, applicant’s declaration simply states what variations are normal and well within manufacturing specifications for actual commercial products. The declaration does not state that two to three percent variations are the art standard for “substantially the same thickness and composition” or if variations of five or even ten percent can still be considered as “substantially the same thickness and composition”. As there are no limits to the variations disclosed by the specification, there are no corresponding limits for the claims. While the examiner acknowledges that one of ordinary skill in the art would understand the method described in applicant’s specification would produce layers with inherent imperfections/impurities, the specification also describes these layers as having “the same” thickness and composition. Thus the phrase “substantially the same” has more imperfections/impurities than those included within the phrase “the same” and the specification does not provide one of ordinary skill any upper limit on the additional imperfections/impurities. Therefore it does not allow one of ordinary skill to determine the scope of the claims.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Anthony Fick



Conferees:

Nam Nguyen



Romulo Delmendo

